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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,984	03/08/2002	Richard D. Schile	J576-001 CIP	2596
21706	7590	10/01/2003	EXAMINER	
NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/683,984

Applicant(s)

SCHILE, RICHARD D.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 2-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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Claims 3-6 and 11-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. (Claim 13 contains the same language as claims 4 and 14 of Group III and was erroneously included in Group I.) Claims 2, 7-10, 15-21 are withdrawn as being directed to non-elected species of imidazole for component a) (claims 2, 7-10 and 15-17), tetramethylguanidine adduct for component c) (claims 18 and 19). The election was made **without** traverse in the response filed September 10, 2003.

The original specification and patent is directed to a mixture of:

- a) a first polyol having phenolic hydroxy groups and/or secondary alcohols.
- b) a second polyol having methylol groups and/or secondary alcohols (embracing trimethylolpropane and a 2- and 6-methylol trihydric compound), and
- c) i) mixtures of polyamines and tertiary amines,
  - ii) tertiary amine(s),
  - iii) imidazole, or
  - iv) dicyandiamide.

The claims of the instant continuation-in-part are drawn to

Claim 1: A mixture of

- a) imidazole or a 2- and 6-methylol trihydric compound,
- b) trimethylolpropane, and
- c) tetramethylguanidine or its adduct.

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Claim 7 (withdrawn): A mixture of a tertiary amine, imidazole and a methylol-functional compound.

Example II.5 on pages 19-20 shows BHMC.TMG.TMP which is a mixture of 2,6-bis(hydroxymethyl)-p-cresol, tetramethylguanidine and trimethylolpropane. Newly inserted paragraph [0026] on page 6 also describes the mixture.

Example II.8 on page 20 shows Im.TMG.TMP which is a mixture of imidazole, trimethylguanidine and trimethylolpropane. Newly inserted paragraph [0025] on page 6 also describes the mixture.

Newly inserted paragraphs [0154] to [0165] on pages 25-28 set forth further aspects of the claims.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This application is a continuation-in-part of parent application no. 09/714,043, now U.S. Patent No. 6,491,845. The U.S. patent number should be inserted into the "Cross Reference to Related Applications" section on page 1.

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The term "Novel" on page 6, paragraph [0024], line 1; page 8, paragraph [0039], line 1; and page 15, paragraph [0065], line 1 should be stricken since there is no evidence to substantiate such a characterization.

Any reference to a temperature is designated by the unknown character "Â°C" throughout the specification. Such a symbol should be amended to the art-recognized "°C" for Centigrade.

The specification only enables trimethylolpropane in combination with tetramethylguanidine or its adduct with a diglycidyl ether. There is no enablement for the combination of tertiary amines in general and the broadly defined methylol-functional compound of withdrawn independent claim 7 and dependent claims 8-12, 15-17 and 19. More favorable consideration would be given to claim 7 limited to a mixture of "tetramethylguanidine or its adduct with a diglycidyl ether, imidazole and trimethylolpropane."

There no enablement for any tetramethylguanidine adduct of claim 1 other than the tetramethylguanidine-diglycidyl ether adduct of claim 18 which is described on page 27, paragraph [0160]. The term "adduct" embraces myriad modifications and derivatives of tetramethylguanidine not within the realm of the disclosed subject matter. More favorable consideration would be given if the limitation of claim 18 is inserted into claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The compound "tetramethylguanidine" is misspelled in claim 1, line 6 according to page 6, paragraph [0025], line 3 and paragraph [0026], line 2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amagai et al. in view of Davis and Saito et al.

Amagai et al. discloses an epidulfide and epoxy groups-containing compound (a) (col. 2, lines 21-36 and 42-43), an active hydrogen atom-containing compound (b) (col. 4, lines 56-59) such as trimethylolpropane (col. 5, line 26) alone or mixed with bisphenol A, F or Z (col. 5, lines 32-33 and col. 6, lines 62-63), and a curing catalyst (col. 6, lines 64-67) including a mixture (col. 9, lines 17-18) of tetramethylguanidine (col. 8, line 10) and imidazole (col. 8, line 36).

The claimed combination of imidazole and tetramethylguanidine is disclosed but not exemplified.

Davis (col. 3, Example 1) shows a composition comprising an epoxy resin, a dicyandiamide curing agent and a benzyl dimethylamine accelerator. The equivalencies between dicyandiamide and tetramethylguanidine (col. 2, lines 49-50) and between benzyl dimethylamine and imidazoles (col. 3, lines 20-21) are disclosed.

Saito et al. espouses tetramethylguanidine as an epoxy curing agent (col. 15, lines 41 and 44-45) alone or in combination with a cresol-novolac resin (col. 15, lines 45 and 48-49) along with imidazoles as a curing accelerator (col. 17, lines 58-49).

It would have been obvious to employ the disclosed mixture of tetramethylguanidine and imidazole of Amagai et al. as a mixture as set forth in Davis and Saito et al. in order to optimize the degree of curing as well as the curing time and/or temperature.

According to MPEP § 2144.06 under the section "Art Recognized Equivalence for the Same Purpose" and the subsection "Combining Equivalent Known for the Same Purpose", "[i]t is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose... [T]he idea of combining them flows logically from their having been individually taught in the prior art (*In re Kerkhoven*, 205 USPQ 1069, 1072, CCPA 1980)."

Amagai et al. teaches the use of both tetramethylguanidine and imidazole for the same purpose as a curing catalyst and is open to their use as a mixture. Therefore, their utilization in combination flows logically from the disclosure of the reference.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vogt et al. in view of Davis and Saito et al.

Vogt et al. (col. 5, Example 3) shows an epoxy-functional (col. 3, lines 15-23) adduct blended with a trimethylolpropane hardener and "others [sic] generally known epoxy resin hardening accelerators (col. 4, lines 52-53)."

The claimed imidazole and tetramethylguanidine is not recited. Davis and Saito et al. are described hereinabove. It would have been obvious to use the imidazole and tetramethylguanidine curative combination of Davis and Saito et al. as the accelerators of Vogt et al. in order to optimize the curing time and/or temperature.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Japanese Patent No. 62-174221 is directed to a polyepoxy compound, a trimethylolpropane hardener and a dimethylurea hardener.



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Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The limitation of component (a) of claim 1 to the 2- and 6-methylol trihydric compound denoted in claims 20 and 21 is not recited by the references.

Claims 1 and 9 encompass either tetramethylguanidine or a tetramethylguanidine adduct. Withdrawn claims 18 and 19 directed to a tetramethylguanidine-diglycidyl ether reaction product as the tetramethylguanidine adduct is not recited by the prior art.

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Robert Sellers  
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Art Unit 1712